CLAIMS

1. A data transmission control method characterized in that

said method corresponds to a data transfer system in which a cyclic data unit is formed by desired data to be transferred and said cyclic data unit is repetitively transferred for a desired period of time, and

a cyclic data unit switching process for enabling a fact that contents of said cyclic data unit were switched to be notified to a client who uses said cyclic data unit from a server side which receives said cyclic data unit.

2. A data transmission control method according to claim 1, characterized in that

control information whose contents are switched in accordance with the switching of said cyclic data unit is included in said cyclic data unit,

said cyclic data unit switching process is realized

by setting a control information change event which denotes that said control information has been received under a standard of a predetermined interface, and

thereafter, executing at least

a first process for allowing the client to transmit a subscribe event to subscribe a reception of

said control information change event to said server,

a second process for allowing the client to transmit an event notice request to request a notification of a generation of an event to the server, and

a third process for notifying the client of a fact that the control information change event has been generated when the changed control information is received as a response of the server to said event notice request.

3. A data transmission control method according to claim 2, characterized in that the transmission of said subscribe event as said first process is executed when the contents of said cyclic data unit are switched.

4. A data transmission control method according to claim 2, characterized in that the transmission of said subscribe event as said first process is executed when a program of said client is activated.

5. A data transmission control method according to claim 2, characterized in that

after said server notified said client of the generation of said control information change event by said third process,

said client continuously uses the cyclic data unit before said control information change event in said third process is generated within a predetermined

period of time until a release request of the cyclic data unit corresponding to said changed control information is transmitted to said server.

6. A data transmission control method characterized in that said method is constructed in a manner such that

said method corresponds to a data transfer system in which a data transmission unit is formed so that an object which is related by a scenario description of a predetermined system is included, further, a cyclic data unit is formed so that one or more data transmission unit to be transferred for a certain predetermined period of time is included, and said cyclic data unit is repetitively transferred; and

an object updating notifying process for enabling a fact that the object included in said cyclic data unit has been updated to be notified to a client who uses the cyclic data unit from a server side which receives said cyclic data unit

is executed.

7. A data transmission control method according to claim 6, characterized in that

control information whose contents are updated in accordance with the updating of said object and relates to said data transmission unit is included in said cyclic data unit, and

said object updating notifying process is

realized

by setting a control information updating event which denotes that said control information has been received under a standard of a predetermined interface, and

thereafter, executing at least

a first process for allowing the client to transmit a subscribe event to subscribe a reception of said control information updating event to said server,

a second process for allowing the client to transmit an event notice request to request a notification of a generation of an event to the server, and

a third process for notifying the client of a fact that the control information updating event has been generated when the updated control information is received as a response of the server to said event notice request.

8. A data transmission control method according to claim 7, characterized in that said third process adds identification information of the data transmission unit shown by the updated control information and notifies the client of a fact that a control information receiving event has been generated.

9. A data transmission control method according to claim 7, characterized in that said method is constructed in a manner such that the transmission of

said subscribe event as said first process is executed when a program of said client is activated or when said cyclic data unit itself is switched.

10. A data transmission control method according to claim 7, characterized in that said method is constructed in a manner such that after a response message for said event notice request from said server was obtained, the event notice request as said second process is immediately executed.

11. A data transmission control method according to claim 6, characterized in that said method is constructed in a manner such that

control information regarding the data transmission unit whose contents are updated in accordance with an updating of the object which belongs thereto is included in said cyclic data unit, and

said object updating notifying process executes at least

a first process for allowing the client to transmit a subscribe event to subscribe a reception of a control information updating event to the server,

a second process for allowing the client to notify the server side of an object ID of an interesting object and allowing the server side to return a data transmission unit ID of the data transmission unit to which the notified object belongs to the client,

a third process for allowing the client to form table information showing a correspondence between the object ID notified to the server side by said second process and the data transmission unit ID obtained from the server side by said second process,

a fourth process for allowing the client to transmit an event notice request to request a notification of a generation of an event to the server,

a fifth process for adding the data transmission unit ID shown by the updated control information when the updated control information is received by the server as a response process to said event notice request in said server and notifying the client of a generation of the control information updating event, and

a sixth process for allowing the client to search the data transmission unit ID of the table information which coincides with the data transmission unit ID obtained by said fifth process and specifying that the object shown by the object ID corresponding to said searched data transmission unit ID has been updated.

12. A data transmission control method according to claim 11, characterized in that said method is constructed in a manner such that the transmission of the subscribe event as said first process is executed when a program of the client is activated or when said

cyclic data unit itself is switched.

13. A data transmission control method according to claim 11, characterized in that said method is constructed in a manner such that after a response message to the event notice request from said server was obtained, the event notice request as said fourth process is immediately executed.

14. A data transmission control method according to claim 6, characterized in that said method is constructed in a manner such that

control information regarding the data transmission unit whose contents are updated in accordance with an updating of the object which belongs thereto is included in said cyclic data unit, and

said object updating notifying process executes

a first process for allowing the client to transmit a subscribe event to subscribe a reception of a data transmission unit updating event to the server together with an object ID of an interesting object and allowing the server to set a peculiar data transmission unit updating event ID in response to it and transmit said data transmission unit updating event ID to the client,

a second process for allowing the client to form table information showing a correspondence between the object ID transmitted to the server side by said

first process and the data transmission unit updating event ID obtained from the server side by said first process,

a third process for allowing the client to transmit an event notice request to request a notification of a generation of a data transmission unit updating event to the server,

a fourth process for adding said data transmission unit updating event ID shown by the updated control information and set in correspondence to the object ID of the object included in the data transmission unit when the updated control information is received as a response to said event notice request in said server and notifying the client of a generation of the data transmission unit updating event, and

a fifth process for allowing the client to identify the object ID of the data transmission unit updating event ID of said table information which coincides with the data transmission unit updating event ID obtained by said fourth process and specifying the object shown by said identified object ID as an updated object.

15. A data transmission control method according to claim 14, characterized in that said method is constructed in a manner such that after a response message for the event notice request from the server was obtained, the event notice request as said second

process is immediately executed.

16. A data transmitting method of transmitting multimedia data, wherein

an event notice is constructed by time information and an event name, a code showing that an event is immediately generated is defined at a position of said time information, and

when it is intended to immediately generate the event, the code showing that the event is immediately generated is arranged at the position of said time information of said event notice and transmitted.

17. A data transmitting method according to claim 16, wherein said code showing that the event is immediately generated is selected from codes which cannot exist as said time information.

18. A data transmitting method according to claim 16, wherein the event notice including said code showing that the event is immediately generated is transmitted at a timing that is a predetermined data processing time before a timing when it is intended to generate the event.

19. A data transmitting method according to claim 16, wherein the event notice including said code showing that the event is immediately generated is transmitted at a timing that is a predetermined data processing time before a timing when it is intended to

generate the event, and after that, a similar event notice is repetitively transmitted at a predetermined period.

20. A data transmitting method according to claim 19, wherein said similar event notice is repetitively transmitted at a predetermined period until the start of a next event.

21. A data transmitting method according to claim 19, wherein said similar event notice is repetitively transmitted at a predetermined period until the end of a program.

22. A data transmitting method according to claim 16, wherein the event notice including said code showing that the event is immediately generated and an event notice describing said time information are mixedly transmitted.

23. A data transmitting method according to claim 16, wherein when there are a plurality of said events, said events are grouped every event for data as a same target, and when event information of a plurality of groups is simultaneously transmitted, a plurality of event information of said every group is merged as one event packet and transmitted.

24. A data transmitting apparatus comprising:

means for transmitting an event notice constructed by time information and an event name; and

means for transmitting an event notice in

which a code showing that an event is immediately generated is arranged at a position of said time information.

25. A receiving apparatus comprising:

means for receiving an event notice; and

means for, when the event notice including time information is received, generating an event in accordance with the time information transmitted by said event notice, and immediately generating said event when an event notice including a code to immediately generate the event is received.

26. A receiving apparatus characterized in that as a receiving apparatus for receiving transmission information in which scene data forming one scene corresponds to one or a plurality of information transmission units and transmission data constructed by one or more said information transmission units is cyclically transmitted, said apparatus comprises:

receiving means for receiving said transmission information and fetching said information as reception data;

scene data fetching means, having memory means which can temporarily store data by said information transmission unit, for extracting the data by the information transmission unit from said reception data, storing said data into said memory

means, and transmitting and storing the information transmission unit as said scene data held in said memory means into scene data storing means for storing the scene data;

scene output means which can output a scene by using desired scene data among the scene data stored in said scene data storing means;

information obtaining means for obtaining scene priority information indicative of priorities of the scenes from the transmission information received by said receiving means; and

control means for controlling said scene data fetching means so as to select the information transmission unit as scene data to be extracted from the reception data and stored in said memory means on the basis of the scene priority information obtained by said information obtaining means.

27. A receiving apparatus according to claim 26, characterized in that

said control means

discriminates the priority of the scene to be changed in accordance with the scene outputted by said scene output means on the basis of said scene priority information, and

controls said scene data fetching means in a manner such that the scene data to be stored in said scene data storing means is obtained in accordance with

said discriminated scene priority and an information transmission unit as said scene data to be extracted from reception data and stored in memory means is selected.